How Childhood Trauma Affects Learning

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Outcomes

- Understand the nature of childhood trauma

- Recognize the impact of trauma on development

- Understand the impact of trauma on learning

- Gain knowledge of appropriate interventions

- Understand the impact of secondary trauma

- Develop a plan to address the needs of traumatized children

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Childhood Trauma

Adverse Childhood Experiences (ACEs)
Growing up in a household with:

- Recurrent physical, sexual or emotional abuse
- Emotional or physical neglect
- Domestic violence between parents
- An alcohol or drug abuser
- An incarcerated household member
- Someone who is chronically depressed, suicidal, institutionalized or mentally ill
- One or no biological parents

(2004, http://www.acestudy.org/)

Consequences Of Unresolved Trauma

Mechanisms by Which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan

(2004, http://www.acestudy.org/)

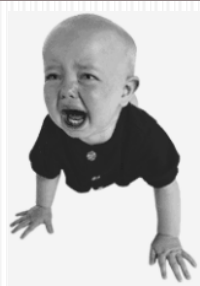## Importance of the Adverse Childhood Experiences Study

- ACEs are surprisingly common—44% of 13,494 adults reported physical, psychological or sexual abuse as children.

- They happen even in "the best of families".

- They can have long-term, damaging consequences for children and society.

(2004, http://www.acestudy.org/)

Trauma and Development

What is Stress?

Stress is the set of changes in the body and the brain that are set into motion when there are overwhelming threats to physical or psychological well-being.

Under threat, the limbic system engages and the frontal lobes disengage. When safety returns, the limbic chemical reaction stops and the frontal lobes re-engage.

(van der Kolk, B., 2005)

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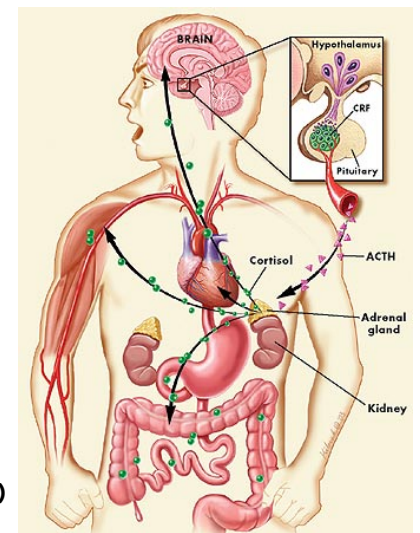
Three Types of Stress

Stressful events can be beneficial, tolerable, or harmful:

- Positive stress: moderate, short-lived stress responses.

- Tolerable stress: more intense stress responses that allow enough time to recover, or occur in a relatively safe environment with the presence of supportive adults.

- Toxic stress: strong, frequent or prolonged activation of the body's stress management system, without access to supportive adults in a safe environment.

(National Scientific Council on the Developing Child, 2005)

Bimodal Response to Stress

Hyperarousal	Dissociation
(Externalizing behaviors, more common in males)	(Internalizing behaviors, more common in females)
Fight	Freezing
Flight	Fainting
Hypervigilant	Somatoform dissociation
Reactive	Numbing
Alarm response	Compliance
Tachycardia	Derealization (depersonalization)

The response that is most adaptive for the individual becomes that individual's automatic response to subsequent stress.

(Adapted from Perry, Child Trauma Academy, 2002)

The Stress Response Cycle

Fight / Flight Response Activated

Event Seen as Threat, Adrenaline & Cortisol Released

Threat Removed, Acetylcholine released

Calm State

Calm State

Adrenaline & Cortisol = Increased Heart Rate & Respiration, Immune System & Frontal Lobes Suppressed
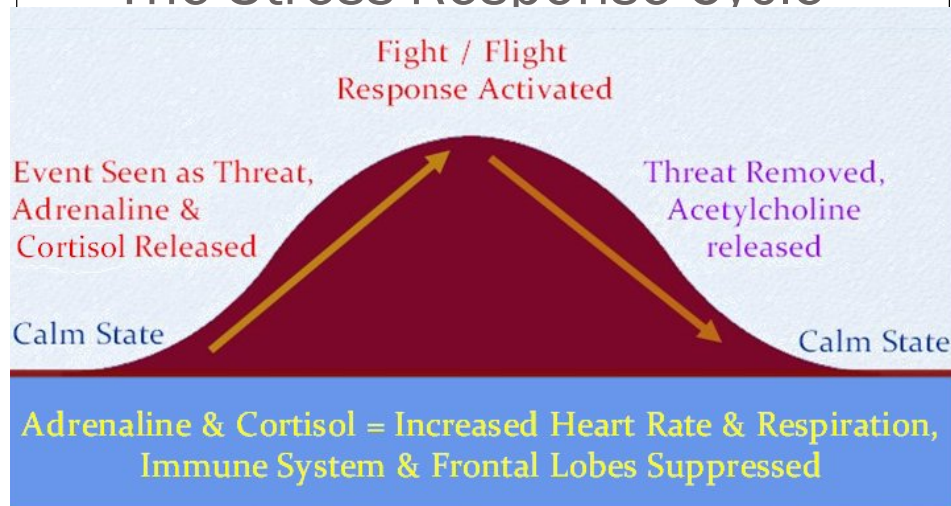
What is Trauma?

Trauma arises from an inescapable stressful event that overwhelms an individuals' coping mechanisms

(van der Kolk & Fisler, 1995).

Childhood Trauma:

Experience or witnessing an event that involves:

* Actual or threatened death or serious injury to self or others

* Threat to psychological or physical integrity of self or others

(Zero to Three, 2004)

Isolated Trauma Versus Complex Trauma

Isolated traumatic incidents tend to produce discrete conditioned behavioral and biological responses to reminders of the trauma (as in PTSD)

Complex (chronic) trauma interferes with neurobiological development and the capacity to integrate sensory, emotional and cognitive information into a cohesive whole.

(van der Kolk, B., 2005)

Responses to Complex Trauma

The trauma response is bimodal: hyper-reactivity to stimuli and traumatic reexperiencing coexist with psychic numbing, avoidance and amnesia (van der Kolk, 2004)

1. Stimulus generalization

2. Triggered pattern of repeated dysregulation in response to trauma cues

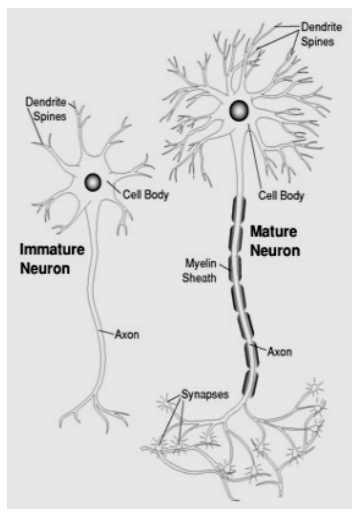3. Anticipatory organization of behavior to prevent the recurrence of the trauma effects

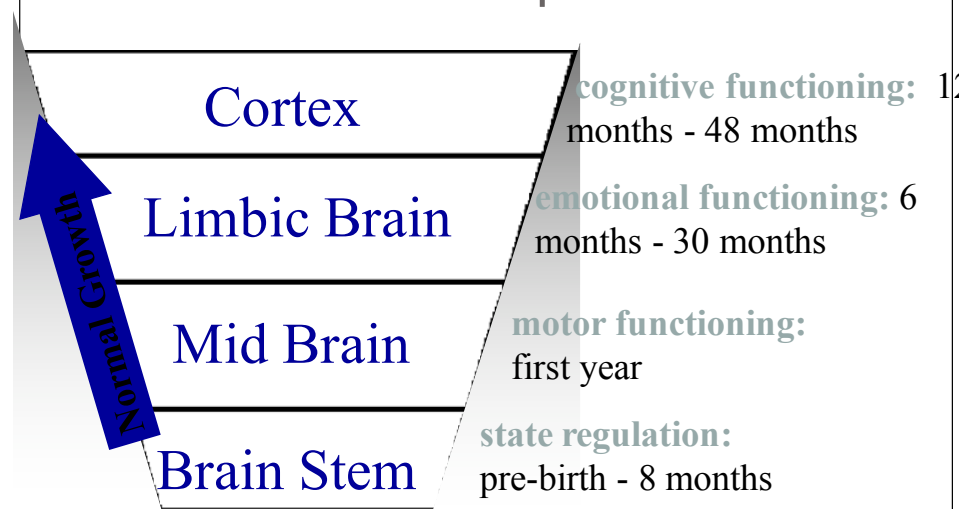(van der Kolk, B., 2005)

Early Brain Development

Use-dependent modification is a core principle of neurodevelopment

- Brain cells (neurons) that are stimulated mature and connections (synapses) develop between neurons.

- Synapses that are used become a permanent part of the brain.

- Synapses that are not used frequently are eliminated.

Dendrite Spines, Dendrite Spines, Cell Body, Cell Body, Immature Neuron, Mature Neuron, Myelin Sheath, Axon, Axon, Synapses

(Perry, 1998)

Traumatic Stress and Critical Windows of Brain Development

Cortex

Limbic Brain

Mid Brain

Brain Stem

Normal Growth

cognitive functioning: 12 months - 48 months

emotional functioning: 6 months - 30 months

motor functioning: first year

state regulation: pre-birth - 8 months

(Adapted from: Perry, 2002)

What are the Long-Term Effects of Traumatic Stress?

- The automatic response to trauma or trauma cues, involves the production of toxic amounts of stress hormones (primarily cortisol) which affect:
  - brain function
  - all major body systems
  - social functioning

(Cairns, K. & Stanway, S., 2004.)

Lasting Effects of Trauma

- Effects on brain development and functioning are often global
  - Physiological effects
  - Physical effects
  - Emotional effects
  - Social effects

Possible Long Term Effects on Brain Functioning

- These brain functions may be diminished or lost:
  - language, especially spoken language
  - expressing words for feelings
  - sense of meaning and connection
  - empathy
  - impulse control
  - mood regulation
  - short term memory
  - capacity for joy

(Cairns, K. & Stanway, S., 2004.)

Physiological Effects

- Perpetual extreme levels of stress arousal may lead to:
  - hypervigilance and loss of ability to concentrate
  - altered vision and hearing
  - hyperactivity or dissociation
  - avoidance of potential triggers to trauma
  - altered sleep patterns
  - altered eating patterns
  - compulsive self harm
  - attempts to self medicate with substances

(Cairns, K. & Stanway, S., 2004.)

Physical Effects

- Continued stress arousal may lead to:
  - headaches
  - digestive disorders
  - respiratory disorders
  - other psychosomatic illnesses
  - muscle tension
  - aching joints
  - clumsiness
  - altered spatial awareness

(Cairns, K. & Stanway, S., 2004.)

Emotional Effects

- Inability to process emotions through language
- Diminished capacity for empathy
- Hypersensitivity to trauma in others
- Diminished range of emotions: terror or rage
- Diminished aesthetic and spiritual experiences
- Feelings of worthlessness and shame
- Traumatic stress takes over core identity

(Cairns, K. & Stanway, S., 2004.)

Social Effects

- May become socially isolated or member of deviant peer group due to:
  - Extreme reactions of terror or rage
  - Diminished empathy limits social connectedness
  - Survival mode restricts motivation to be sociable
  - Avoidance restricts capacity to connect to others
  - Diminished language restricts social accountability
  - Traumatic identity leads to persistent victim or aggressor behaviour

(Cairns, K. & Stanway, S., 2004.)

Discussion Questions

1. Does the research presented on childhood trauma help you to look at children in your classrooms or schools differently?

2. How might this information help you to better meet children's needs?

Resiliency and Recovery

Shaping the Early Brain

- Dr. Bruce Perry, Texas Children's Hospital, a leading researcher in early brain development and childhood trauma:

  - "Children are not resilient, they are malleable."
    - Resilient: "Able to recover readily from misfortune"
    - Malleable: "Capable of being shaped or formed"

  - "Childhood experiences define the adult by shaping the developing brain."

NATURE ~~VS.~~ AND NURTURE

What is Resiliency?

Resilience describes an individual's positive functioning despite experiencing adverse circumstances.

- Resiliency is influenced by vulnerability factors, compensatory factors, and protective factors, operating at the individual, family and community levels.

- Should NOT be considered an individual character trait

(Luthar & Cicchetti, 2000)

Factors that Influence Recovery

- The child's personality
  - Strong social competence – the ability to be empathetic, caring & responsive
  - Creative thinking - problem solving, resourcefulness
  - Autonomy – strong self-esteem, ability to separate self from dysfunctional environment
  - Sense of purpose – optimism, persistence toward achieving goals, hopeful outlook for future

(Luthar & Cicchetti, 2000)

Factors that Influence Recovery

- The type of trauma
  - Children who experience an isolated trauma, such as a natural disaster, will more quickly gain a sense of control because the stressful event comes to an end.

  - Children who experience complex trauma (violent neighborhood, abuse, domestic violence) have more difficulty with recovery because they can't separate from the stressful environment.

(Luthar & Cicchetti, 2000)

Factors that Influence Recovery

- <u>Strong support systems</u> - the majority of children that are provided with strong support systems overcome developmental damage and actually use the challenges from their lives to develop strength and confidence
  - Individualized intervention strategy, that includes
    - Therapeutic support
    - Family support
    - School support
    - Community support

(Luthar & Cicchetti, 2000)
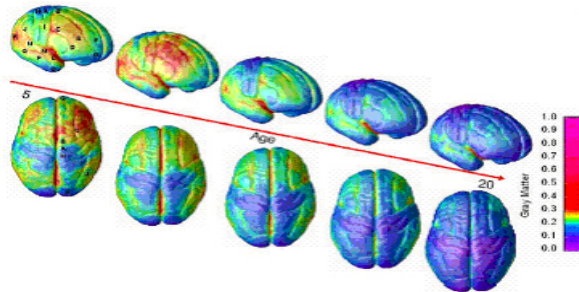
Discussion Questions

There is a correlation between resiliency and recovery and the quality of supports surrounding a child.

- What supports are already available in your
  - School?
  - Community?

- What supports need to be developed?

Effects of Trauma on Learning

Opportunity for Intervention

National Institutes for Mental Health,

The prefrontal cortex doesn't fully develop until about age 21, it's functions include:

         * **Reasoning**   * **Problem solving**

         * **Integrating information from the senses**

Why is it more difficult for schools to work with children who are traumatized?

- Issues over changes of placement or mobility
- Lack of adequate information or expertise
- Lack of clarity about roles and responsibilities
- Lack of knowledge and skill to deal with traumatized children
- Difficulty of containing post traumatic behaviors in the school environment
- Effects of secondary traumatic stress

                                (Cairns, K. & Stanway, S., 2004)

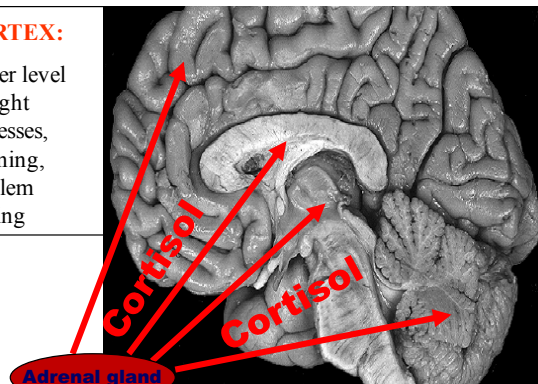## Explicit and Implicit Memory

CORTEX:
higher level thought processes, planning, problem solving

HIPPOCAMPUS:
Explicit memory - governs recollection of facts, events or associations

AMYGDALA:
Implicit memory – No conscious awareness (procedural memory – e.g., riding a bike and emotional memory- e.g., fear)

Chronic stress = overstimulation of the **Amygdala,** resulting in the release of cortisol, possible shrinkage or atrophy of the **Hippocampus** and **Cortex,** affecting memory and cognition, and leading to anxiety or depression.

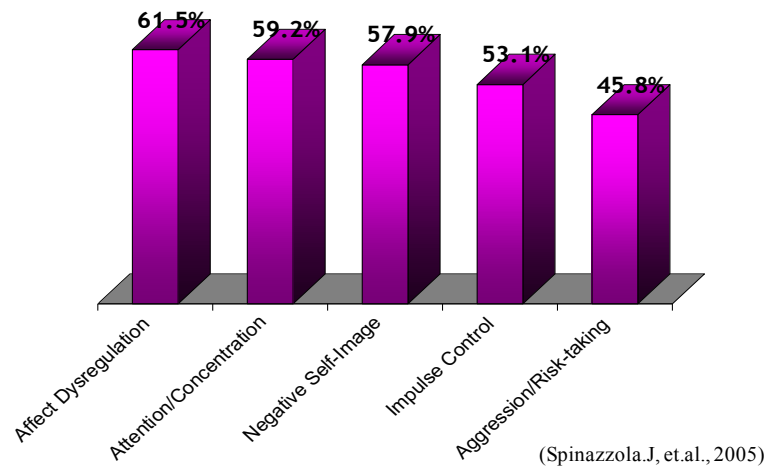   (Adapted from: Brunson, Lorang, & Baram, 2002)

Effects of Trauma on IQ and Achievement

Research shows substantial decrements in both IQ and reading due to trauma.

- 7.5 point decrements in IQ

- 9.8 point decrements in reading achievement

                           (Delaney-Black, et.al., 2002)

Most Frequent Difficulties Following Chronic Trauma

Bar chart values:
- Affect Dysregulation: 61.5%
- Attention/Concentration: 59.2%
- Negative Self-Image: 57.9%
- Impulse Control: 53.1%
- Aggression/Risk-taking: 45.8%

(Spinazzola.J, et.al., 2005)

How Traumatized Children are Typically Diagnosed

The most common psychiatric diagnoses in order of frequency:
- separation anxiety disorder
- oppositional defiant disorder
- phobic disorders
- PTSD
- ADHD

(van der Kolk, B., 2005)

Relationship Between Diagnoses & Eligibilities

Special Education Eligibility:
Emotional Disturbance

Inability to learn not explained by health, intellectual, or sensory disability;

Inability to build/maintain relationships;

Inappropriate behavior or feelings under normal circumstances;

Pervasive anxiety or depression;

Physical symptoms or fears.

Special Education Eligibility:
Specific Learning Disability

Disorder in basic psychological processes involved in understanding/using language, spoken or written, may manifest in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations.

Psychological/Neurobiological Diagnosis:
Traumatic Stress

Rarely in attentive state

Defiant, aggressive, oppositional

Hyperarousal

Internalizing disorders

Fear, somatic disorders

Rarely in attentive state;

Lack of concentration;

Misperceptions;

Avoidance;

Dissociation;

Repeated intrusive memories

(Shumow & Perry, 2006)

Manifestations of Trauma that Affect School Performance

- Externalizing Behaviors: Coping by acting out on external world (physical/verbal aggression).
  - More visible
  - More likely to receive intervention in school
- Internalizing Behaviors: Coping by withdrawing into the self (anxiety, depression, dissociation).
  - Less visible
  - Less likely to receive intervention in school
- Somatic Disorders:
  - Frequent visits to school nurse
  - Frequent school absences

(Shumow & Perry, 2006)

How we Perceive Traumatized Children

- Many problems of traumatized children can be understood as efforts to minimize objective threat and to regulate their emotional distress

- Unless teachers understand the nature of such re-enactments, they are likely to label the child as "oppositional," "rebellious," "unmotivated," or "antisocial"

(van der Kolk, B., 2005)

Power and Control Strategies that are NOT Beneficial

- Threats
- Bribes
- Control over bodily functions, like prohibiting children from using the bathroom
- Random enforcement of petty rules
- Humiliation or degradation
- Isolation
- Corporal punishment

(van der Kolk, 2006)

What Youth Say:

"I changed schools three times, so friends were hard to keep. I had a lot of conflict at school. I felt isolated and alienated."

"School was the most consistent thing in my life. I moved around a lot and I went to nine different elementary schools. But I always knew that my teacher was going to be there when I got there every morning and I didn't have that at home."

Discussion Question

Knowing that for traumatized children some behaviors are organic rather than willful, how do we reconcile that with current discipline policies?

Interventions for Children with Trauma

Curriculum for Traumatized Children

Connecting

1 Safety
2 Engaging
3 Trusting

Processing

4 Managing the self
5 Managing feelings
6 Taking responsibility

Adapting

7 Developing social awareness
8 Developing reflectivity
9 Developing reciprocity

(Cairns, K. & Stanway, S., 2004.)

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Step I - Safety First

- Stay aware of the terror

- Provide and sustain a relaxing environment

- Use self appropriately to deal with a terrified flight animal: voice, gestures, expression

- Use group work skills to create sense of safety

- Bring relaxation into the awareness of the child and encourage practice

- Discourage dependence on high stimulus activities

Step II - Engaging

- Provide appropriate environmental stimulation for adults and children

- Learning about the effects of trauma is part of the treatment

- Stories and metaphors are powerful tools for teaching about overwhelming events

- Encourage expression of experience and development of emotional intelligence

- Bring dissociation into awareness, develop sense of protector self and observer self

Step III - Trusting and Feeling

- Accept the level of trust the child has to offer

- Encourage open discussion of issues of trust

- Encourage the child to express inner states in words, even though they will find this difficult

- Notice non-verbal signals of feelings and help child to recognize and name what is happening

- Identify self-transcending as well as self-assertive emotions

Step IV - Managing the Self

- Discuss and practice relaxation and soothing activities with the child

- Avoid asking 'why did you do that?' Instead invite reflection linking inner state with actions

- Encourage the child to be interested in their own inner state with regard to their behaviour

- Comment on small indicators of self-regulation

- Encourage children to build on growing capacity for self-management

Step V - Managing Feelings

- Expect and contain disturbed behaviour

- Help child to engage with therapy

- Encourage child to feel more in control - space, time, activities

- Limit choices, restrict choice-making to less stressful situations and celebrate successes

- Encourage child to recognize and celebrate learning from mistakes

Step VI - Taking Responsibility

- Recognize the power of traumatic identity and expect resistance to changing identity

- Provide choices about how they see themselves

- Allow child to let go of excessive or inappropriate responsibilities

- Encourage child to allow adults to be in control appropriately

- Celebrate any evidence of the child taking appropriate responsibility for behaviour

VII - Developing Social Awareness

- Encourage friendships and social interaction

- Identify and rehearse social situations requiring self-control in the child

- Encourage the child to broaden the range of their social connections and to be interested in people generally

- Promote activities motivating social accountability such as sport, drama, music

VIII - Developing Reflectivity

- Promote self-esteem; catch them doing something good

- Provide and comment on role models of centered people who are comfortable in their own lives

- Encourage the use of tools for reflection such as keeping a diary

- Help children deal with feedback from a range of social situations

- Be creative about ways to help the child become fearlessly reflective

IX - Developing Reciprocity

- Provide and invite reflection on wide range of aesthetic experiences

- Share thoughts and feelings

- Apologize when we hurt the child

- Encourage the child to reflect on our experience as well as their own

- Invite the child to take our position - 'What do you think I should do about this?' in response to child's behaviour

- Accept that we are a problem for the child

Dealing with Individual Incidents of Post-traumatic Behavior

1. Safety first
2. Engaging
3. Trusting and Feeling
4. Managing the self
5. Managing feelings
6. Taking responsibility
7. Developing social awareness
8. Developing reflectivity
9. Developing reciprocity

Secondary Trauma

Trauma is catching:
Secondary Traumatic Stress

- Secondary traumatic stress is the stress that results from caring for or about someone who has been traumatized.

- It can result in injuries similar to those produced by primary trauma.

- People who are empathic, and/or have experienced trauma in their own lives, and/or have unresolved personal trauma are vulnerable.

- **People who care for traumatized children are particularly vulnerable to secondary traumatic stress.**

(Cairns, K. & Stanway, S., 2004.)

Impact of STS on individuals

- Performance
  - decrease in quality and quantity
  - increased mistakes
  - avoidance of tasks
  - perfectionism
  - obsessiveness
  - exhaustion
  - irresponsibility

- Morale
  - decrease in confidence
  - apathy
  - dissatisfaction
  - negativity
  - feel incomplete
  - subsume own needs
  - detachment

(Cairns, K. & Stanway, S., 2004.)

Impact on whole network

- Withdrawal

- Lack of appreciation

- Impatience

- Increase in conflict

- Poor communication

- Persecutor/victim/rescuer dynamic

(Cairns, K. & Stanway, S., 2004.)

Discussion Questions?

1. In what ways do we see secondary trauma affecting your school staff?

2. How do we currently support school staff who may be impacted by secondary trauma?

Recommended Reading:

Right on Course: How trauma and maltreatment impact children in the classroom, and how you can help.

Available from: Civitas, www.civitas.org

Learn the Child: Helping looked after children to learn.

Available from: British Association for Adoption & Fostering, www.baaf.org.uk

Helping Traumatized Children Learn: Supportive school environments for children traumatized by family violence.

Available from: Massachussets Advocates for Children, www.massadvocates.org

Content for this presentation was compiled from the following sources:

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